

AN EXPLORATION OF TEACHERS' PERCEPTION ON THE USE OF DIGITAL RESOURCES IN SOCIAL SCIENCES AND ARTS EDUCATION IN KADUNA STATE COLLEGE OF EDUCATION GIDAN WAYA

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Abstract

Digitization is the drive of modern society. Individuals, corporate organizations, social institutions and governments are steadily incorporating digital resources into their daily activities to remain visible in the ever evolving tech-driven world. This study explores the perception of teachers on the use of digital resources in teaching and learning and also, investigates the accessibility of digital resources to teachers. Through a multi stage sampling procedure, the school of secondary education arts and sciences program of Kaduna State College of Education Gidan Waya made up of eight departments was purposively selected. A calculated sample size of 52 was drawn from a population of 181 using Yemane's formula with a margin of error (0.05). Questionnaires were used to collect data and bar charts were used for presentation and analysis. Findings revealed that teachers believe that incorporating digital resources in their teaching is advantageous to learning outcomes. Majority are also somewhat confident of their ability to navigate digital resources. However, a significant number of teachers are not currently using any digital resource in their instruction delivery. Inability to afford high speed internet connections, inadequate digital literacy training, unreliable power supply were identified as major challenges to accessing digital resources. It was recommended that educational institutions should step-up provision of supportive infrastructures to facilitate incorporation of digital resources in teaching. Staff training on use of digital resources should also be intensified.

Keywords: Perception, Digital resources, Teachers, Accessibility

Introduction

The advent of digitization in education can be described as one of the most exciting 21st century gifts to the world. The 2010s witnessed the rise of Massive Open Online Courses (MOOCs) offering free and open-access courses from top universities, attracting millions of learners across the world (Koller, Ng, Do & Chen, 2013). More so, the COVID-19 pandemic quickened the adoption of digital education, compelling educational institutions worldwide to adapt rapidly (Hodges, Moore, LockeeTrust & Bond, 2020). Today, virtual classrooms, video conferencing, and collaborative online tools have become essential components of education (Hrastinski, 2018).

The use of digital resources in education has transformed the traditional learning landscape across the globe. With the widespread use of technology, particularly the internet, education has become more accessible and flexible (Educause Review, 2020). Digital education has revolutionised learning, making it more accessible, flexible, and technology-driven. Digital resources provide students with round-the-clock access to learning materials, granting them liberty to study at their own pace and convenience (Hollands, & Tirthali, 2014). Digital tools make learning more engaging through multimedia, simulations, and

gamification. Digital assessments and quizzes also provide instant feedback to students, helping them to monitor and evaluate their progress and areas for improvement (Mayer 2009, Tew & Bouldin, 2017). Digital resources often come in handy, in portable formats which are convenient for use on-the-go thus, reducing the need for physical textbooks and materials, which leads to potential cost savings for both students and institutions (Allen & Seaman 2017). Overcoming geographical boundaries and offering learning institutions opportunities to reach a global audience thereby fostering international collaboration is also made possible through digital education (Altbach & De Wit, 2017).

Digital learning resources include:

- Openly licensed materials like textbooks, videos, and courses that are freely available for anyone to use, modify, and share.
- Learning management platforms that facilitate course management, content delivery, assessment, and communication between educators and learners such as Moodle, blackboard, Canva, google classroom and adobe captivate prime.
- E-Libraries and Digital Archives that serve as repositories of digital books, scholarly articles, historical documents, and other resources for research and reading.
- Video Lectures and Multimedia content utilized for presentations to help convey complex concepts (Mayer, 2009)
- Educational Games and Gamification used to captivate learners' attention, provide motivation, promote skill development, enhance subject mastery amongst other benefits.(Deterding, Dixon, Khaled & Nacke,2011)

Educational applications cover a variety of software programs designed with age appropriate features and cutting across various disciplines, to enhance the teaching and learning process. Examples include Khan academy, wyzant, reading rocket, google expedition, merge cube, zoom online meetings and learning, Duolingo for language learning, prodigy, scratch, Quizlet etc (Khan academy 2021).

In spite of the aforementioned benefits of using digital resources to which the advanced nations of the world have since mastered and are improving upon, developing nations are still struggling to acclimatize to the global digital ecosystem. It is acknowledged that despite the variety and number of technology available to teachers, utilization during teaching-learning process especially as a transformative resource has remained disturbingly low. This can be attributed to the beliefs teachers hold about usefulness of digital resources and ease of usage which directly affects attitudes and behaviours in incorporation of new technologies. In a study conducted among early childhood and primary teachers on teachers' beliefs about the role of digital educational resources in educational practice, it was found that teachers were favourably disposed towards digital resources and also highlighted various benefits they believed to be derived from using digital resources which are similar to those mentioned earlier. However, the challenges associated with digital resources such as poor network connectivity, dearth of requisite digital literacy skills, time demands in preparing lessons with DR etc (Alberola-Mulet, Iglesias-Martínez & Lozano-Cabezas, 2021). Other challenges associated with the use of DRs are identified as follows:

- vii. Inadequate infrastructure and access to the internet which limits the availability and accessibility of learners to digital resources (UNESCO, 2017).
- viii. The cost of digital resources is beyond the reach of most learners in developing countries, affordability and availability of devices such as computers and smartphones poses a significant drawback for students and schools (World Bank, 2020). Accessibility of digital resources to low-income and/or remote areas also creates disparities in educational opportunities in developing nations (Warschauer & Matuchniak, 2010). Furthermore, the cost of acquiring digital learning materials and maintaining technology infrastructure can

be inhibitory for educational systems already suffering resource-constraints (UNESCO, 2020).

- ix. Another major constraint to the utilization of digital resources is fluctuating electricity which can interfere greatly with learning and the use of digital resources. Interruptions in power supply can create frustrations to both teachers and learners who may be unwilling to try again and again thereby slowing the pace of progress in digital learning (World Bank, 2020).
- Digital literacy gap is also a challenge to digital learning. Insufficient digital literacy among students and teachers can hinder the effective use of digital resources for learning. Developing countries are largely left to catch-up with advancements in technology. Related to this is the absence of training and ongoing support for teachers to enable effective integration of digital resources into their teaching practices (Chansa-Kabali & Anamuah-Mensa 2016; Karsenti & Fievez, 2013).
- Since digital resources are often developed with a global perspective, teachers and course instructors may encounter difficulties in trying to localise resources and align content to suit local curricula and needs. This whole process of trying to fit-in creates a condition of maladroitness (Ongugo et al., 2017).

The digital transformation of education is a dynamic and ongoing process that continues to shape the future of learning. Embracing and integrating digital resources in social sciences and arts education is no longer optional or a matter of disposition but, a case of necessity for relevance in the present time.

Statement of the problem

The integration of technology into every sphere of human endeavor has become the order of this age and consolidating the same into social sciences and arts education has become imperative. However, there are issues constraining application of technology in education particularly in social sciences and arts education some of which bother on the following:

Perceived effectiveness of digital resources such as interactive simulations, multimedia content and online textbooks on teaching and learning as well as the impact of these resources on students' comprehension and engagement with educational content.

Secondly, the accessibility of digital resources to students and teachers with varying socio-economic backgrounds in view of barriers and disparities is also a hindrance to successful integration of digital resources in teaching.

Also, teacher preparedness in terms of possessing the requisite digital skills for effective adoption and incorporation of digital tools and resources in instruction delivery is another access-related challenge.

This study seeks to provide insights into perceptual and accessibility issues associated with the use of digital resources in social sciences and arts education and contribute to the development of strategies for enhancing both acceptability and accessibility to these resources.

Objectives

The following objectives guided the study:

- i. To explore teachers' perceptions towards using digital resources in social sciences and arts instruction.
- ii. To investigate the accessibility of digital resources in social sciences and arts education.
- iii. To compare the effectiveness of digital resources with traditional teaching materials in social sciences and arts instruction.

Methods

The descriptive survey design is adopted for this study. Multistage purposive sampling technique was adopted. Kaduna state college of education Gidan Waya was selected amongst the tertiary institutions in the state. Among the seven schools in the college, school of secondary education arts and social sciences program was selected. A questionnaire comprising of both closed and open-ended items was designed to elicit responses surrounding the study objectives. Data was analyzed using simple percentages and presented in bar charts.

The population comprised of eight departments in the school of secondary education arts and social sciences programs with a total of 181 teaching staff. Yemane's formula for determining required sample size was applied to arrive at a sample size of 52.

Results and Discussion

Figure 1: Responses on currently using digital resources in classroom instruction

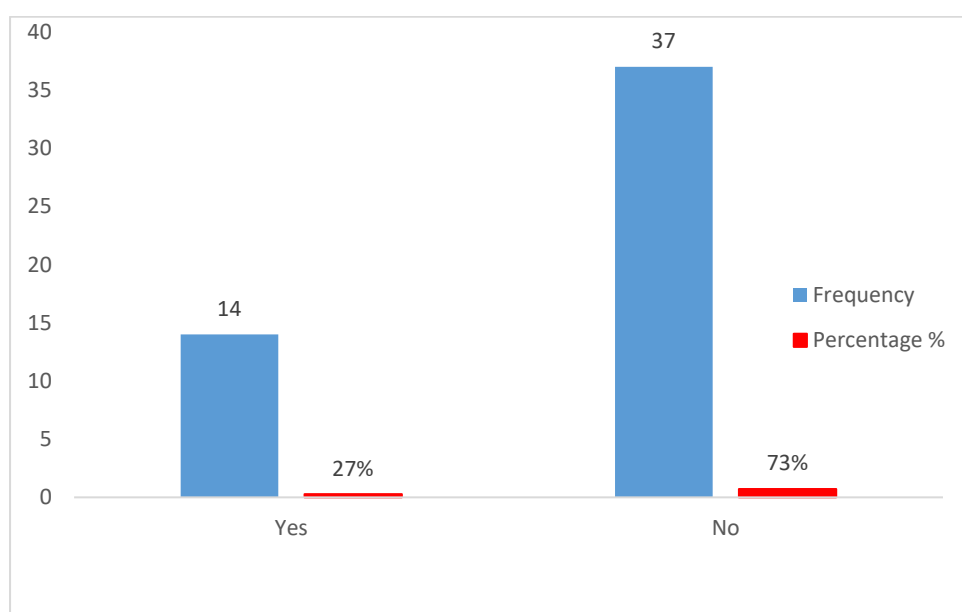
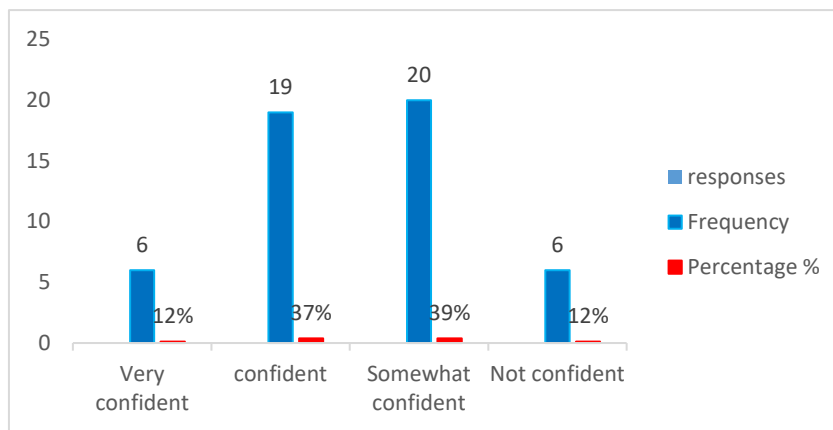


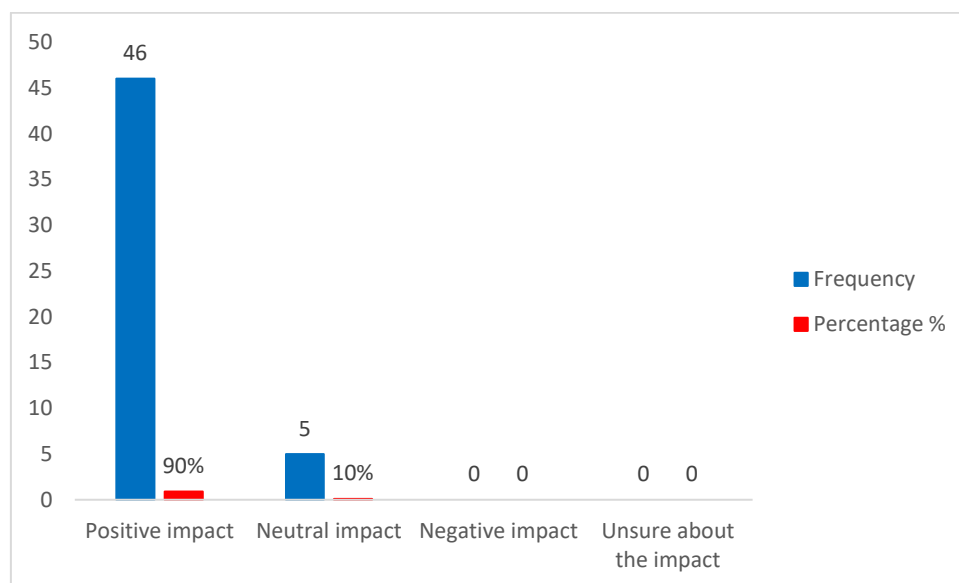
Figure 1 above shows that most of the respondents are currently not using digital resources in their classroom instruction, while only few of them are using it. This is an indication that majority of the teachers are still using traditional/printed materials for their class room instruction.

Figure 2: Responses on the confidence of the respondents in their ability to navigate and use digital resources effectively for teaching

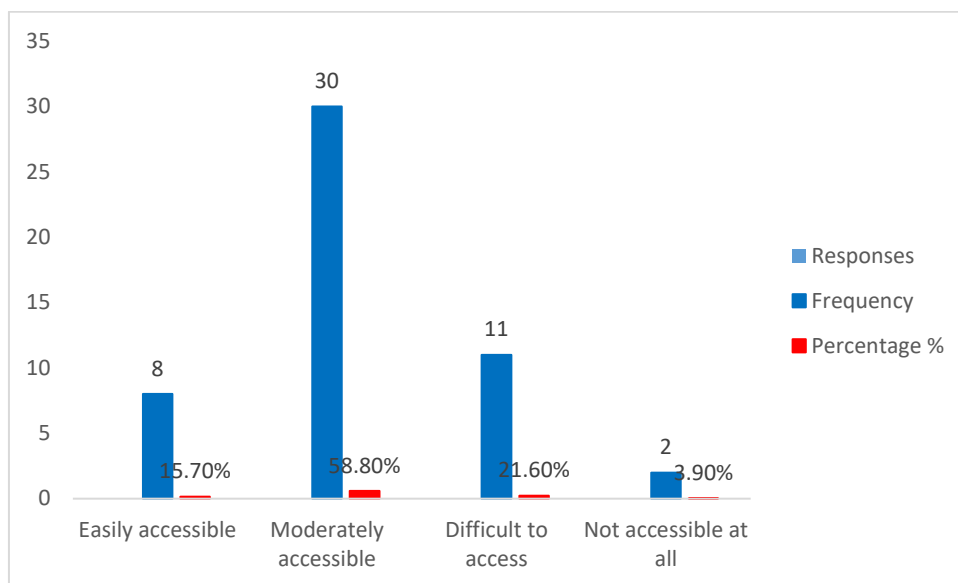


Responses in figure 2 above indicates that most teachers have some level of confidence in their ability to use digital resources while few are very confident of their ability to find their way around digital resources with little or no assistance at all. A little proportion expressed no confidence regarding use of digital resources.

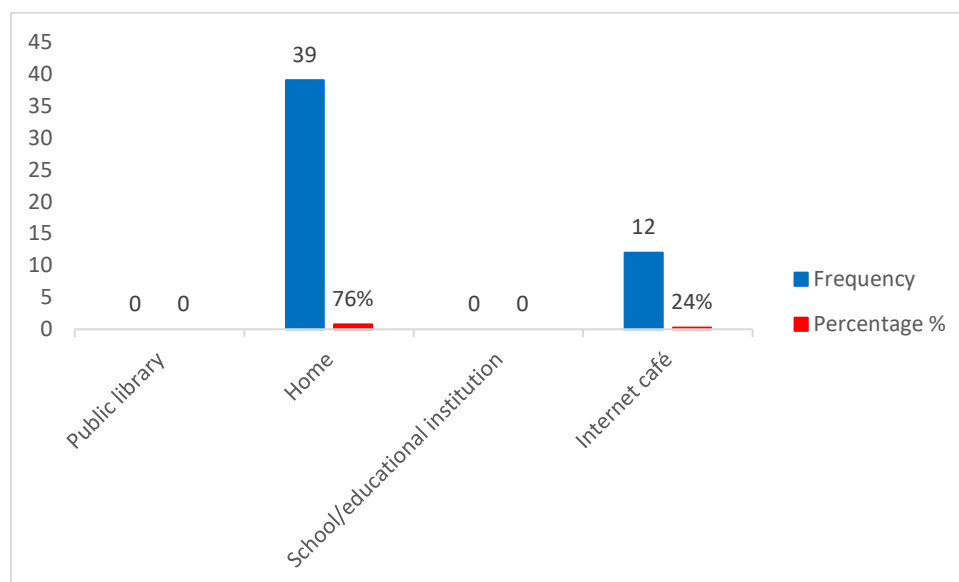
Figure 3: Distribution of respondents based on their perception of the impact of digital resources on educational outcomes



From figure 3 above, teachers believe that digital resources would have a positive impact on educational outcomes. While a very few of them believe that the impact would be neutral, none of them believe that the use of digital resources would have either negative impact or an uncertain impact.

Figure 4: Responses on the rate of respondents' access to digital resources?

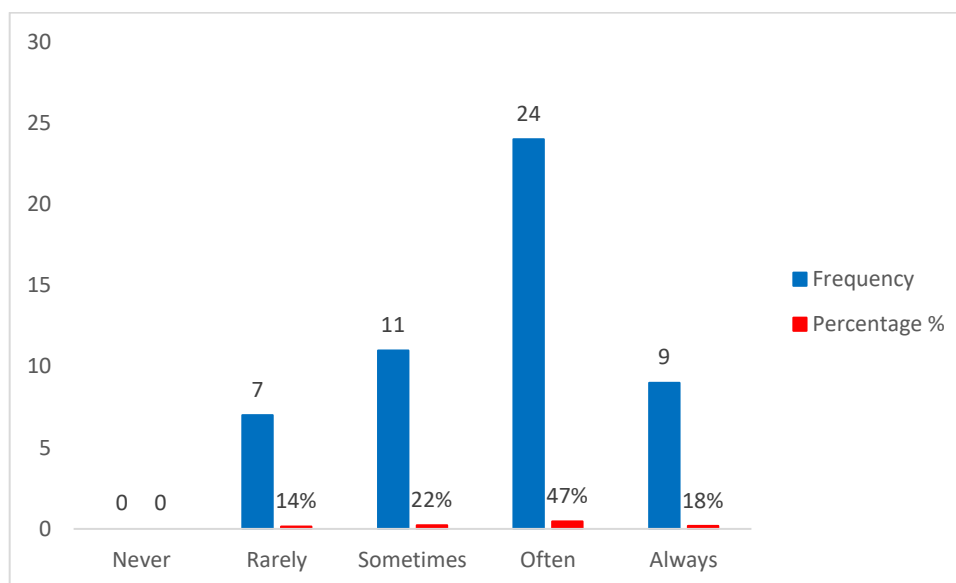
The responses displayed in figure 4 above reveal that digital resources are moderately accessible to majority of the teachers. While they are difficult to access and easily accessible by a considerable number of teachers, they are not accessible at all by an insignificant number of teachers.

Figure 5: Distribution of respondents based on where they access internet services

From the analysis in figure 5 above, most of the teachers access internet services at home, and only few of them access internet services from internet café. None of the teachers accesses

internet services from either public library or school/education institution as shown in the above table.

Figure 6: Responses on the frequency of the use of internet by respondents



There is no single teacher who never makes use of the internet as seen in figure 6 above. Some of them use the internet always or rarely, while most of them use it often or sometimes.

Figure 7: Preferred teaching and learning format by respondents

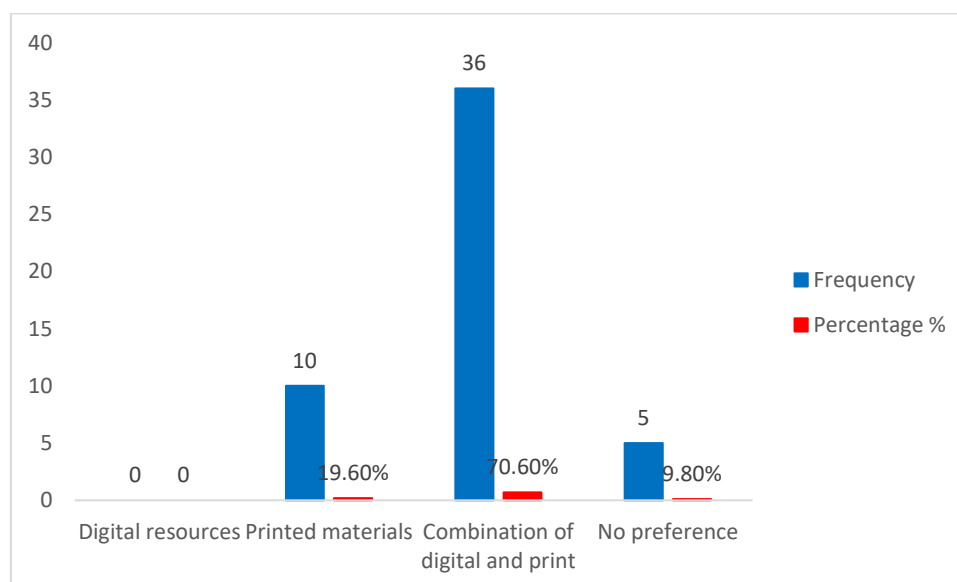


Figure 7 as shown above reveals that teachers prefer using a combination of digital and print materials in teaching and learning. Only a few of them prefer printed materials or have no preference. But none of them has preference for only digital resources.

Figure 8: The effectiveness of digital resources compared to traditional materials

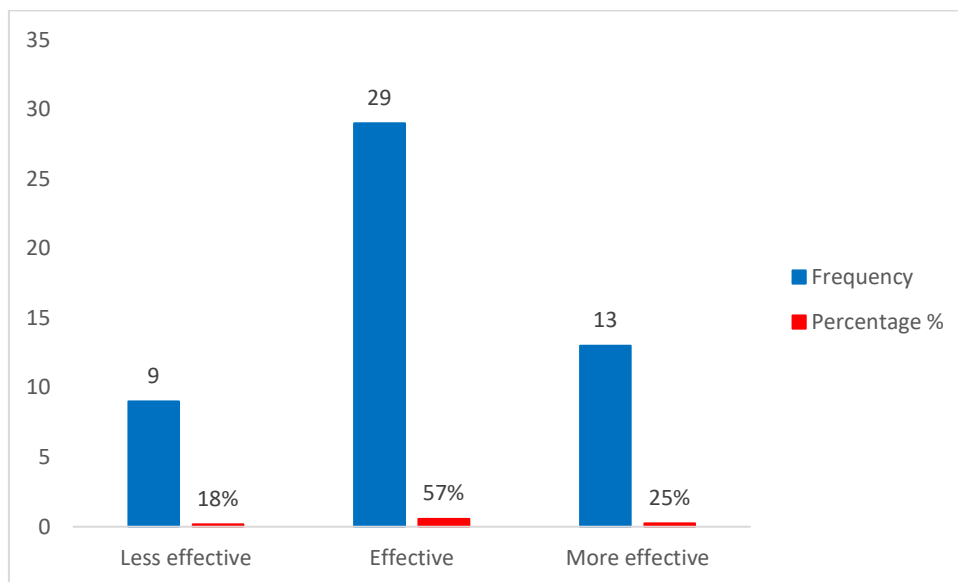


Figure 8 above reveals that more teachers agree that digital resources are effective in teaching compared to traditional materials. A good number also agree that digital resources are not just effective but more effective.

Figure 9: Responses as to whether digital resources can be more engaging and motivating compared to traditional resources

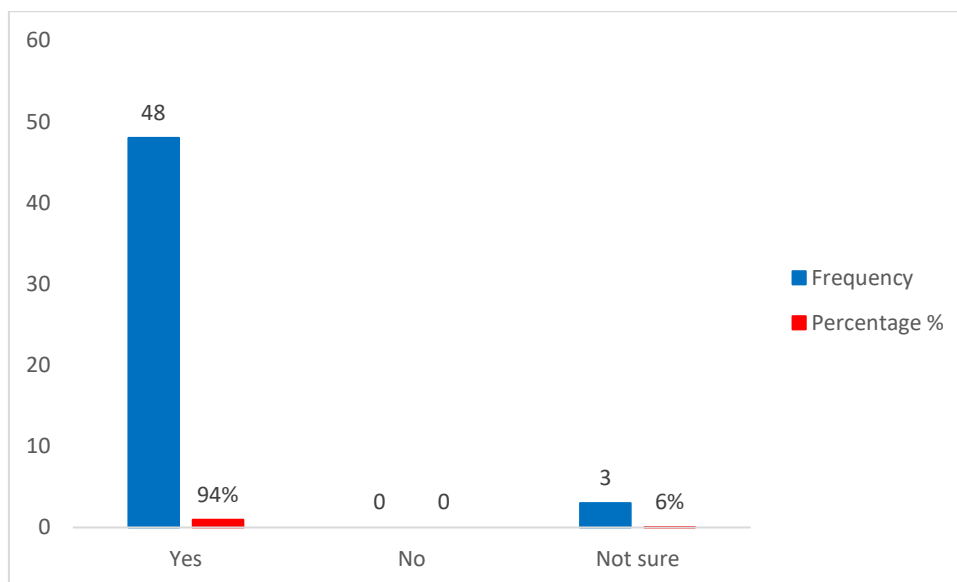
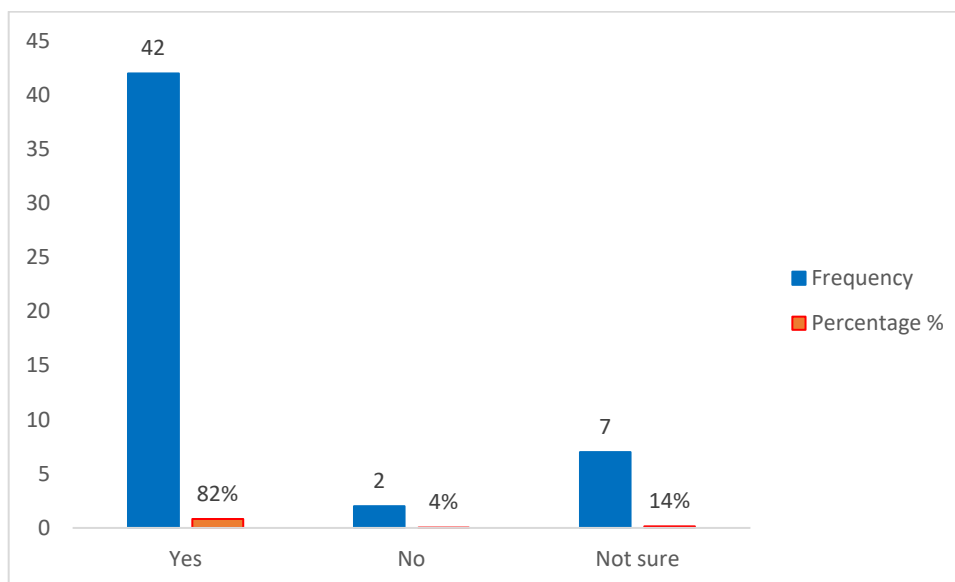


Figure 9 above shows that majority of respondents believe that digital resources holds potentials for more engagement and motivation of learners compared to traditional resources. While negligible number of them are not sure of their potentials (digital resources), none of them believe that the (digital resources) have no potentials compared to traditional resources.

Figure 10: Responses on the advantages of digital resources in terms of access and flexibility for learners



The responses displayed in figure 10 above reveal that majority of the respondents believe that digital resources offer advantages in terms of access and flexibility for learners. A few of them on the other hand are not sure of the advantages, and an insignificant number of them believe that they (digital resources) have no advantages in terms of access and flexibility for learners.

Discussion of findings

Findings of the study revealed that majority of the respondents are not currently utilizing digital resources though a significant majority perceive that digital resources positively impact educational outcomes. Also, most respondents access digital resources from their homes and describe their access rate as moderate though again, a good number of respondents do not use the internet always. Ironically too, no respondent acknowledged that digital resources alone was their preferred format of teaching and learning, instead majority preferred a combination of print and digital resources. A significant majority agreed that digital resources can be more engaging and motivating and also offer more advantages in terms of access and flexibility to learners. Challenges/ barriers identified by respondents in the use of digital resources include poor network connections, high cost of purchasing resources, limited digital education/ training and inadequate power supply. These corroborate the positions of UNESCO, 2017, World Bank, 2020 and similar studies that access to network, unstable electricity, and insufficient digital literacy are some challenges faced by users of digital resources especially in developing countries.

Recommendations

Institutions of learning need to provide facilities that support digital learning within the schools, to boost the morale of teachers towards incorporating these resources in lesson delivery as well as developing their digital literacy skills. There is also a need to organize regular training and retraining on digital literacy as well as having a technical support team to assist with ensuring smooth access to digital resources. This will go a long way in translating the positive perceptions of benefits derivable from digital resources utilization from ideologies to practical behaviours of incorporating in teaching and learning.

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